Color Touch PC Box/Electronics Tray Upgrade and Service Guide: PowerCom3

Overview of electronics changes and PowerCom2 to PowerCom3 swap instructions

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Omnicell, Inc.
1201 Charleston Drive
Mountain View, CA 94043
(650) 251-6100
www.omnicell.com

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Color Touch PC Box/Electronics Tray Upgrade and Service Guide: PowerCom3

Overview

This chapter identifies and describes the new hardware on the Color Touch PC Box (referred to in this manual as the CT PC Box) and electronics tray.

The new CT PC Box has been redesigned to:

- Increase efficiency
- Decrese assembly costs
- Minimize internal differences with the electronics Tray setups.

Features and Benefits

The new setup has:

- A PowerCom3 board
- A single 300W AC/DC Power Supply
- A 20-minute battery backup
- Metal friction Printed Circuit Board Assembly (PCBA) standoffs
- A new Universal Serial Bus (USB) diagnostics port for laptop interface
- Dual cooling fans
- A 2500A Transient Voltage Suppressor (TVS) for surge protection
- An added AUX termination switch for easier power on and off operation.

In addition, the CT PC Box hard disc drive (HDD) has been relocated and given added shock absorbing mounts. The power supply and battery are mounted on the same bracket to save space.

A failure detection alarm has been installed to indicate fan failure and a battery status indicator buzzer has been added to alert the user when the battery backup is getting low.

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The DC/DC Power Supply has been integrated into the PowerCom3 board, increasing efficiency and available space in the CT PC Box and tray.

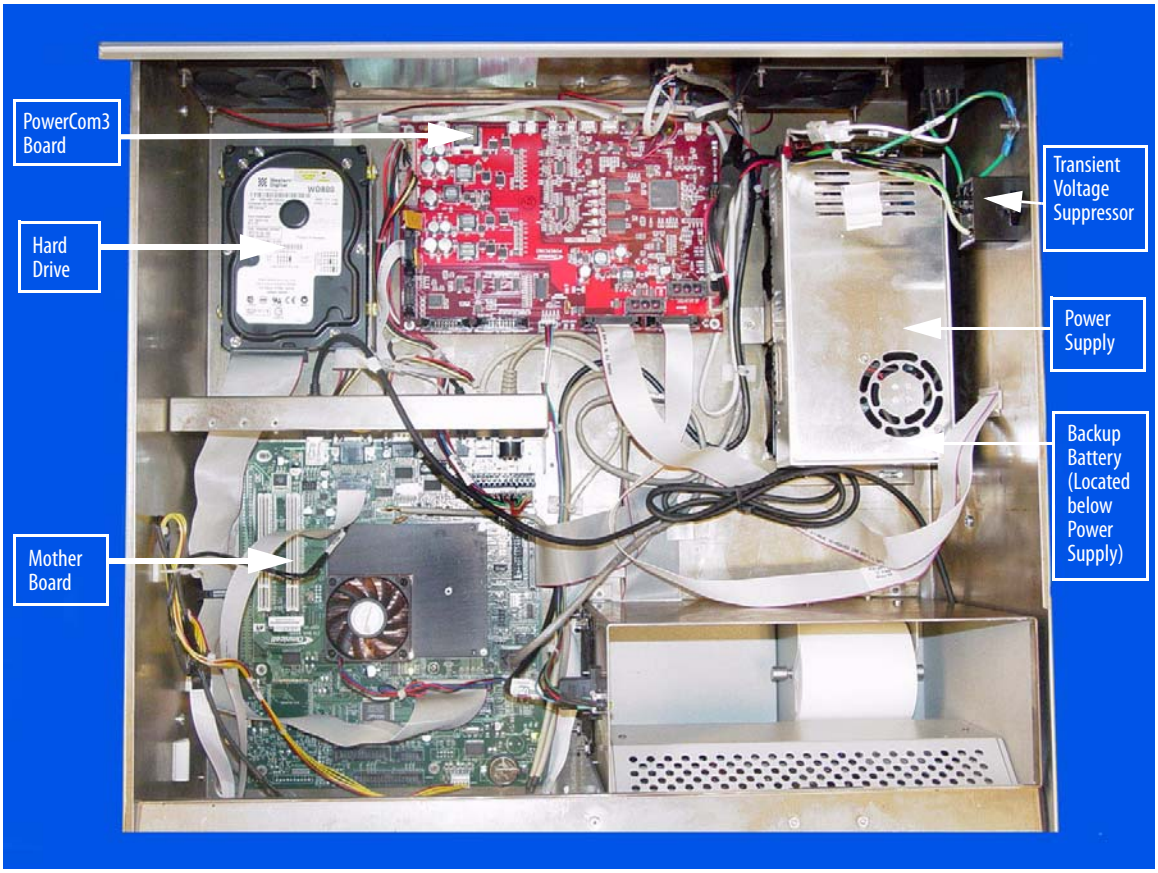

Figure 1-1. Location of components within CT PC Box with PowerCom3 board

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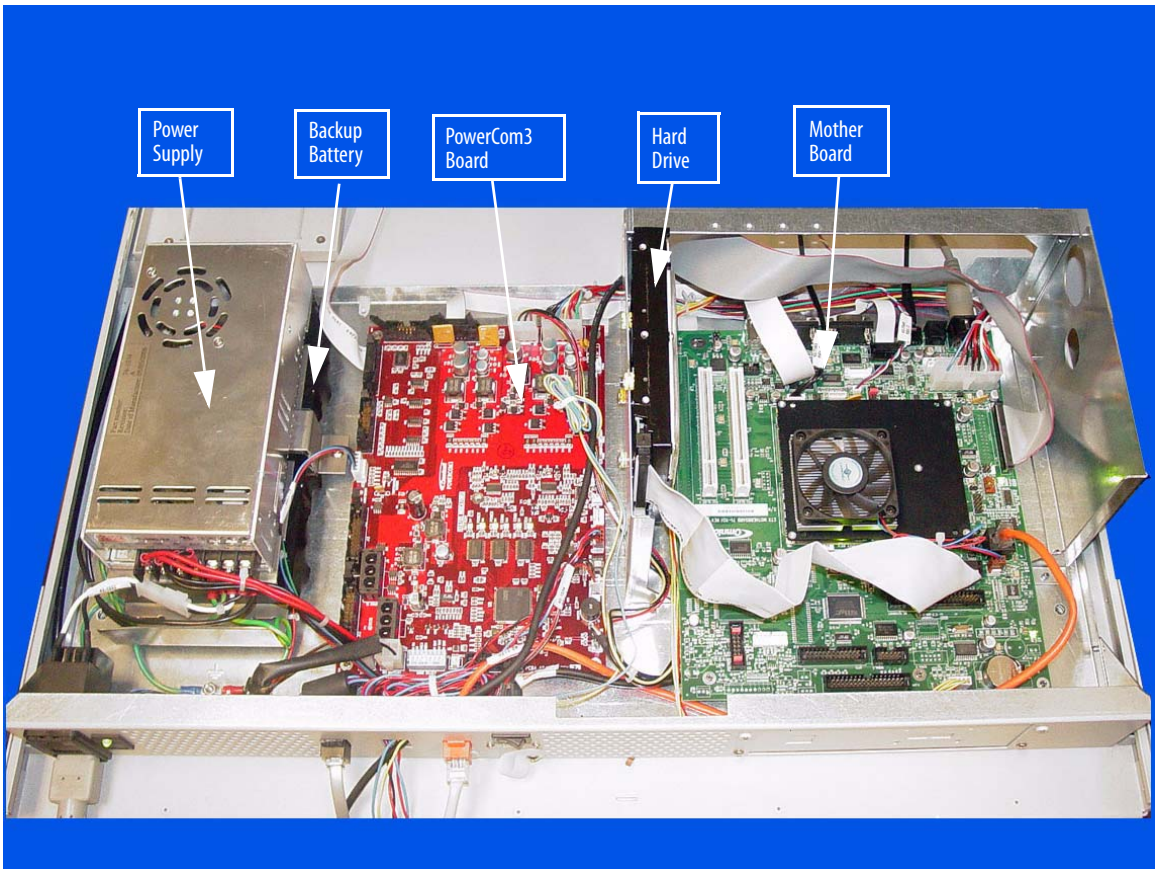

Figure 1-2. CT PC Tray with PowerCom3 Board

Pre-Implementation

Note: To clear up any possible confusion in the following procedure, the CT PC Box with a PowerCom2 board will be called the PowerCom2 CT PC Box. The CT PC Box with the new PowerCom3 board will be called the PowerCom3 CT PC Box.

It is not possible to upgrade from a PowerCom2 CT PC Box to a PowerCom3 CT PC Box. The entire unit must be swapped out. Before performing the swap in the field, be sure to review the following documents and procedures:

- *OmniSupplier Color Touch* chapter in the **Technical Manual for Color Touch Software Version JT5.3x**.
- **Omnicell Drug Handling Policy and Procedures** for information regarding the removal of drugs from the Pharmacy drawers.

Important: A Pharmacist must be present when servicing drawers where medications are present.

Refer to the *Removing and Replacing Pharmacy II Drawers* chapter in the **OmniSupplier Manual CD**.

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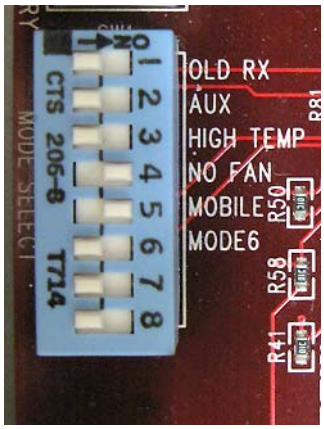
Tools List

The following tools are needed to install the CT PC Box:

- 9/64” Allen Wrench
- T15 Torx Driver
- T10 Torx Driver
- T8 Torx Driver

Check the dip switches

Switch labeled as SW1 MODE SELECT on the board determines the mode of PowerCom3 operation. Generally, all switches need to be off.



Special selection can be made in the following instances:

- When PowerCom3 is used in old OmniRX sled with small 18V battery with power on/off switch on the power entry module.
- When PowerCom3 is used in AUX. In this case the main communication is coming from AUX connector instead of the PC Interface connector.
- When PowerCom3 is used in burn-in room to disable the shutdown if the temperature reaches above 115 °F.
- When PowerCom3 is used in OmniRX sled with no FAN.
- When two other mode selection switches are reserved for future implementation.

Pin	Name	Descriptions	CTPC	Rx Sled	Aux	Old Sled	Supply Mobile Cart
1	OLD RX	Set to old RX mode with small battery	OFF	OFF	OFF	ON	OFF
2	AUX	Set to AUX mode	OFF	OFF	ON	ON	OFF
3	HIGH TEMP	Disable high temperature shutdown	OFF	OFF	OFF	OFF	OFF
4	NO FAN	Disable fan error detection	OFF	ON	OFF	OFF	ON

Table 1-1. PowerCom3 Dip Switches

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Pin	Name	Descriptions	CTPC	Rx Sled	Aux	Old Sled	Supply Mobile Cart
5	MOBILE	Lithium Ion Battery Select	OFF	OFF	OFF	OFF	ON
6	MODE 6	Not used	OFF	OFF	OFF	OFF	OFF
7		Not used	OFF	OFF	OFF	OFF	OFF
8		Not used	OFF	OFF	OFF	OFF	OFF

Table 1-1. PowerCom3 Dip Switches

CTPC Box Installation

Remove the PowerCom2 CT PC Box

Prior to swapping the CT PC Box, establish a process for supply/medication removal so the nurses can track transactions while the system is down. (Example forms are located in the Implementation Guide.)

1. Perform a graceful shutdown of the cabinet software, then power down the cabinet and disconnect the machine from the wall outlet.
2. Disconnect the LAN cable and the AUX cables from the rear of the CT PC Box.

Figure 1-3. Location and labels for LAN and AUX cable connections on CT PC Box

3. Remove the PowerCom2 CT PC Box.
   a. Pull open the keyboard door to access the screws fastening the CT PC Box to the frame.
   b. Remove the buttonhead 8-32 x 7/8" and buttonhead 8-32 x 3/8" screws.
   c. Slowly pull the CT PC Box from the frame until the side-mounted slides lock and stop.
   d. Unlock the CT PC Box cover with the cam lock key #2036.
   e. Remove the cover by lifting the front end and pulling away from the cabinet.
   f. Disconnect the SPC cables from the PowerCom2 board. Remove the cables from underneath the power supply and out of the shee metal enclosure.
   g. Tuck the SPC cables - still connected to the wireway - under the transport handle on the side of the OmniSupplier frame.
   h. Release the CT PC Box from the slides, carefully remove it from the cabinet and set it on a flat surface.

Caution: The CT PC Box is heavy. Trying to lift or remove the box alone could result in injury. Use a second person to help lift and remove the CT PC Box from the OmniSupplier cabinet.

4. Prepare the PowerCom2 CT PC Box for return.
   a. Unplug the battery from J5 on the PowerCom2 board.

      National Transportation Safety Board (NTSB) regulations prohibit an uninterrupted power supply (UPS) from being connected during transport.

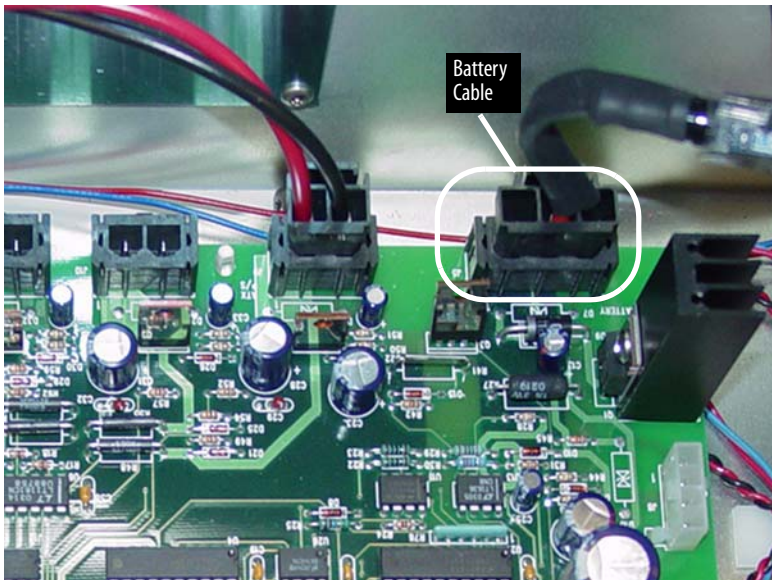

Figure 1-4. Location of battery cable on motherboard of PowerCom2 CT PC Box

   b. Replace and lock the top cover.
   c. Once the PowerCom3 CT PC Box has been removed from the shipping box and installed in the cabinet, place the PowerCom2 CT PC Box in the shipping box and secure it for return.

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Prepare the New CT PC Box for Installation

The PowerCom3 CT PC box is lighter than the PowerCom2 box and does not require two people for installation and/or removal.

Note: Follow ESD safety procedures. Always wear an ESD strap when working with electronic components.

1. Unlock the PowerCom3 CT PC Box top cover with the cam lock key #2036.
2. Lift the front cover and slide it forward to remove.
3. Locate the cable to the battery and instert the connector into the PowerCom3 board at J2.

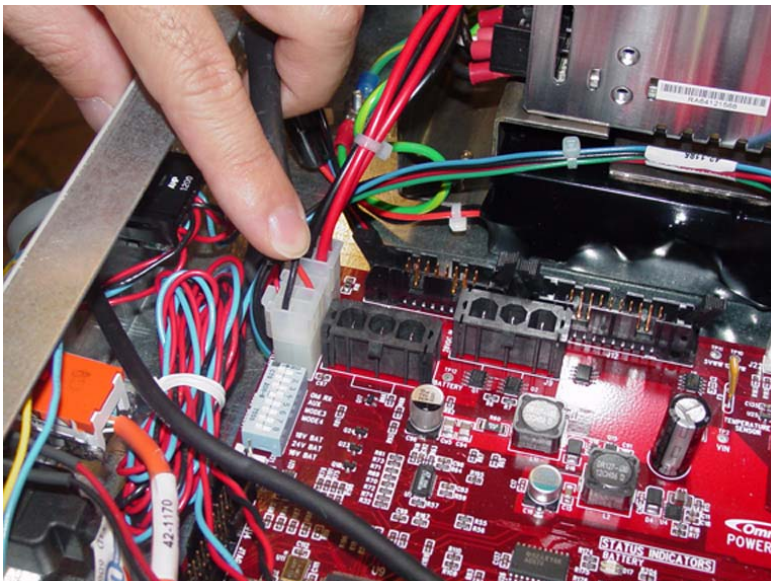

Figure 1-5. Connect the Battery Cable to J2 of the PowerCom3 Board

Install the CT PC Box

1. Remove the PowerCom3 CT PC Box from the shipping box and lift it onto the rail slides of the cabinet. Do not slide the CT PC Box completely into the cabinet.
2. Thread the SPC cable into the CT PC Box and connect it to J12 and J13 of PowerCom3 board.
3. Replace the cover and lock it using the cam lock key #2036.
4. Slide the CT PC Box completely into the cabinet.
5. Pull open the keyboard door to access the screws fastening the CT PC Box to the frame.
6. Replace the buttonhead 8-32 x 7/8” and buttonhead 8-32 x 3/8” screws.

Field Installation of a New CT PC Tray

Remove the PowerCom2 CT PC Tray

1. Perform a graceful shutdown of the cabinet software, then power down the cabinet and disconnect the machine from the wall outlet.

2. Disconnect the LAN cable and the AUX cables from the rear of the CT PC Box.

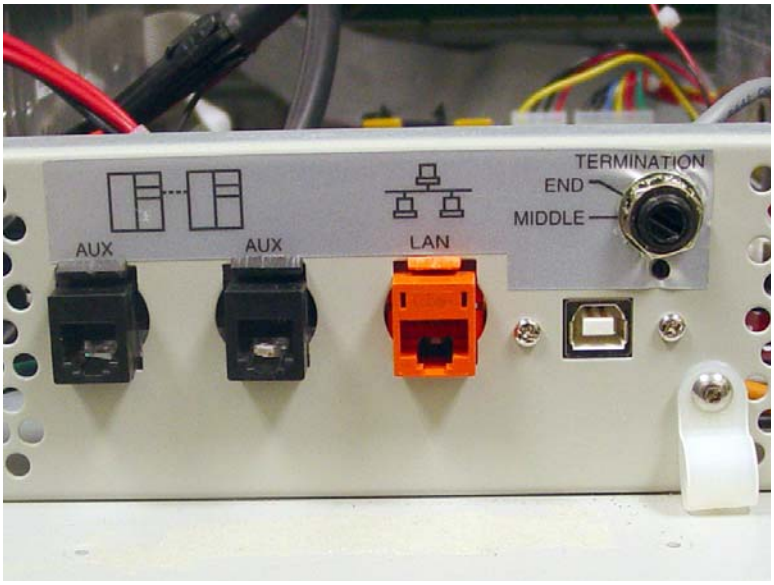

Figure 1-6. Location and labels for LAN and AUX cable connections on CT PC Tray

3. Access the electronics tray.

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4. Disconnect the following cables (from tray only):
   a. LCD data cable
   b. Contrast cable
   c. Inverter (backlight) cable
   d. Touch screen data cable
   e. Keyboard cable
   f. Speaker cable
   g. Card reader cable (if applicable–not shown)
   h. Fan power cable (if applicable)
   i. Printer cable (free cable from any clips)
   j. Cabinet power/comm cable

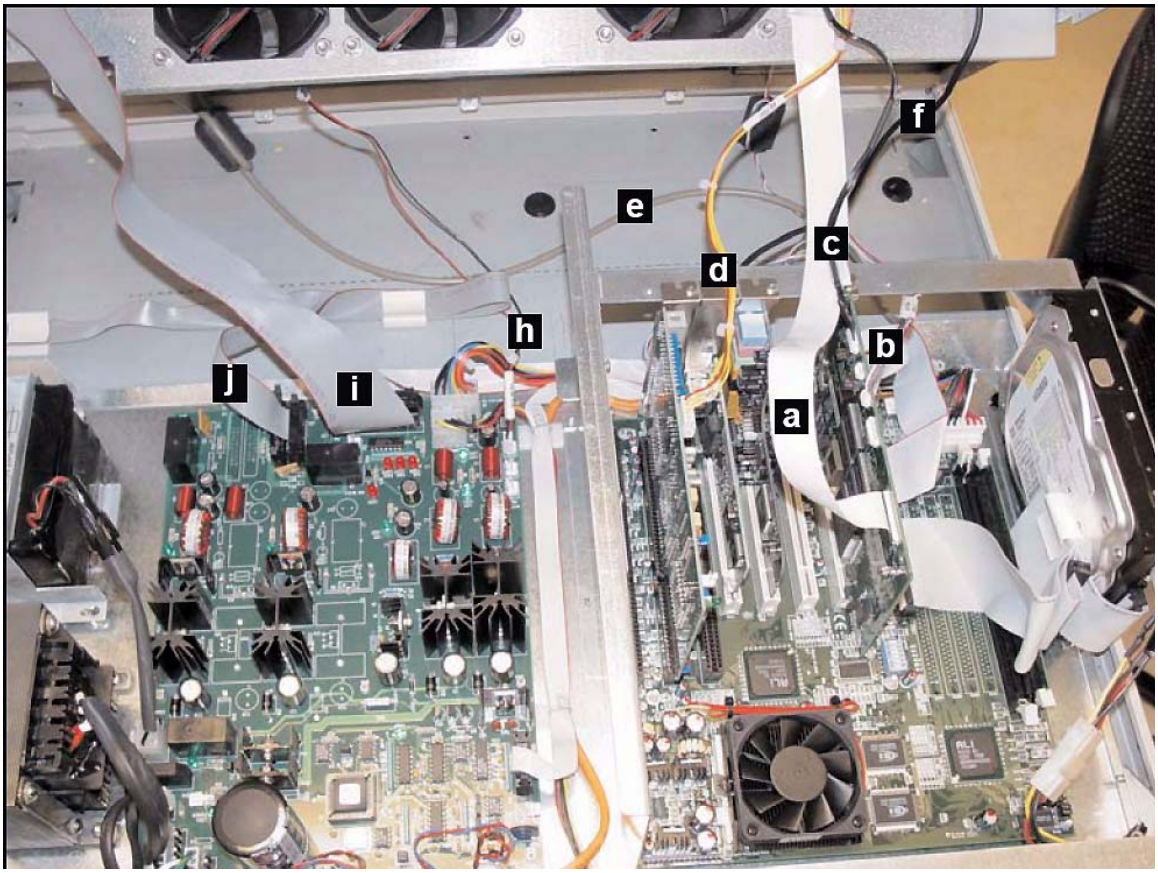

Figure 1-7. Location of cables on the CT PC Tray with PowerCom2 Board

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Remove the PowerCom2 tray from the Anesthesia Workstation

1. Turn the two 1/4-turn fastners securing the electronics tray counter-clockwise to unlock.

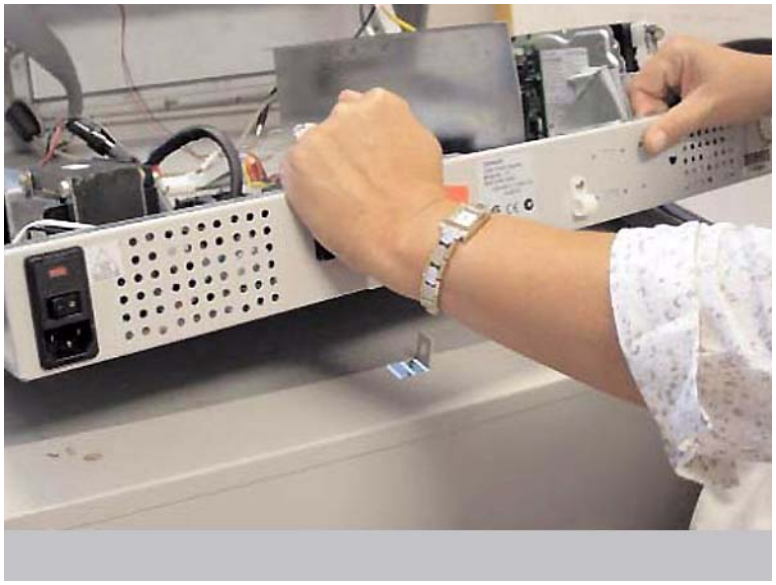

Figure 1-8. Lift and remove the CT PC Tray with from the Anesthesia Workstation

2. Lift the front edge of the tray over the two standoffs and pull the tray forward.
3. Lift the rear of the tray and twist slightly until the front tabs clear the frame.
4. Remove the electronics tray.

Remove the PowerCom2 tray from the Omni Rx/TT

1. Turn the two 1/4-turn fastners securing the electronics tray counter-clockwise to unlock.
2. Lift and remove the electronics tray.

Remove the PowerCom2 tray from the Omni Rx/TT

1. Lift and remove the electronics tray.

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Install the PowerCom3 CT PC Tray

Installing the tray into the Anethesia Workstation

1. Place the new electronics tray into the cabinet. Place the rear of the tray in first and lower until it touches the back of the tray.

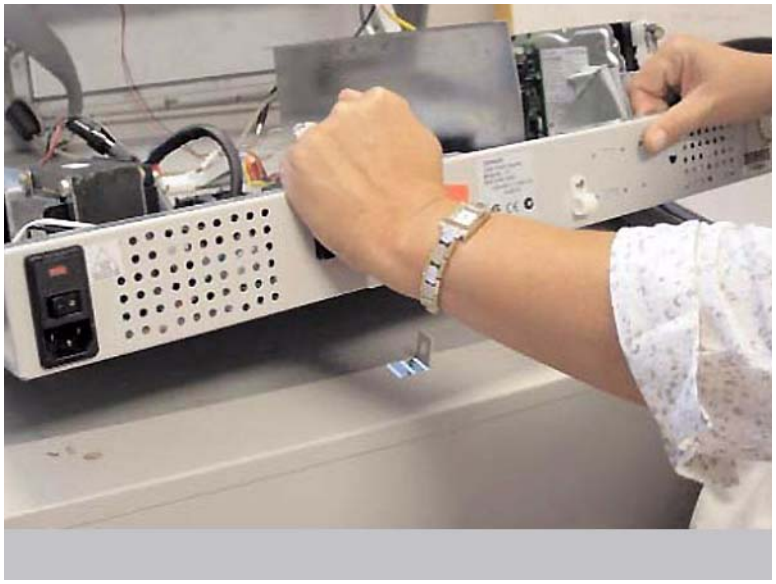

Figure 1-9. Place the CT PC Tray into the Anesthesia Workstation

   a. Ensure the front of the tray clears the frame of the tray and set the tray down.
   b. Secure the tray onto the standoffs.
   c. Turn the two 1/4-turn fastners securing the electronics tray clockwise to lock the tray into place.

Installing the tray into the Omni Rx/TT

   a. Place the new electronics tray into the cabinet.
   b. Turn the two 1/4-turn fastners securing the electronics tray clockwise to lock the tray into place.

Installing the tray into the Half Cell

   a. Place the new electronics tray into the cabinet.

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Replace the cables

1. Connect the wireway cable to the J10 of the PowerCom3 Board

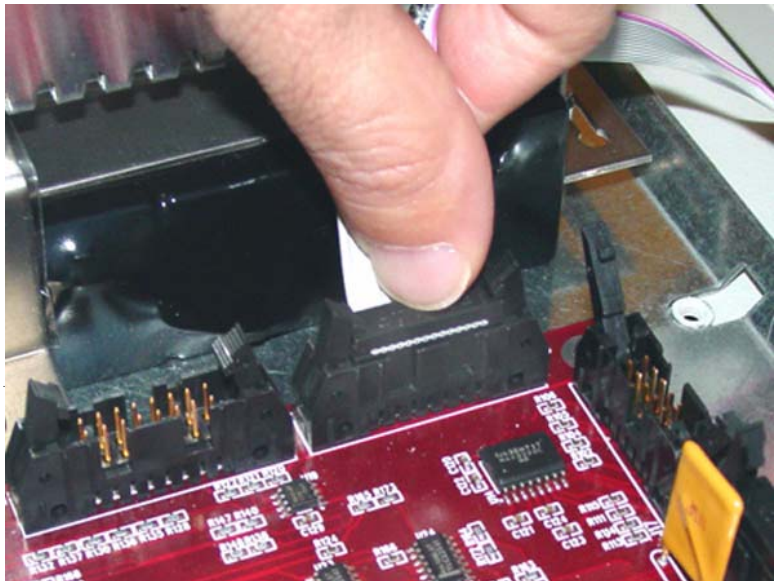

Figure 1-10. Connect the Wireway Cable to J10 of the PowerCom3 Board

2. Connect the printer cable to J27 on the motherboard.

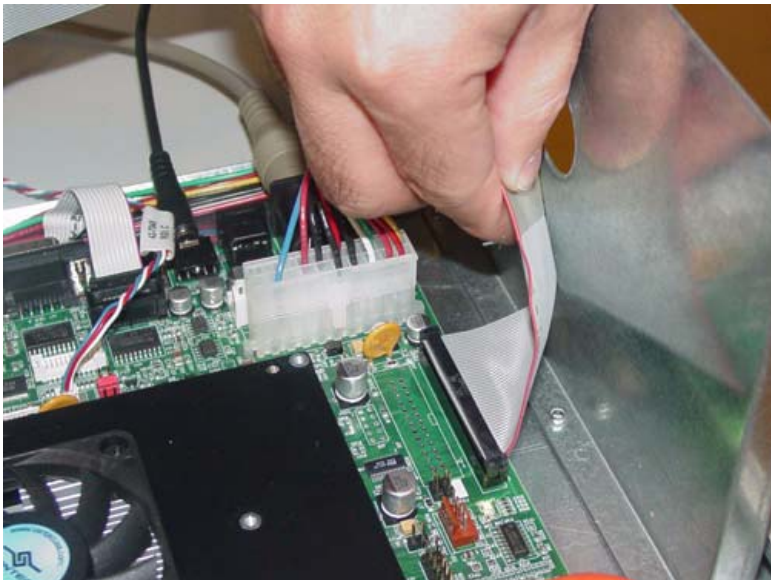

Figure 1-11. Connect the Printer Cable to J27 of the Motherboard

Note: Ensure that the red wire is connected closest to Pin 1.

3. Connect the fan power cable to J17 on the UPS board (if applicable).

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4. Connect the speaker cable to port J45 on the motherboard.

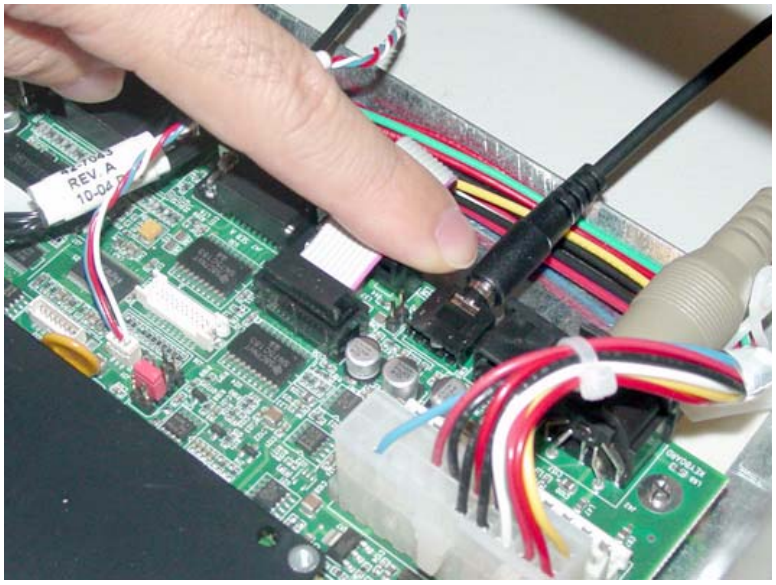

Figure 1-12. Connect the Speaker Cable to J45 of the Motherboard

5. Connect the keyboard cable to port J42 on the motherboard.

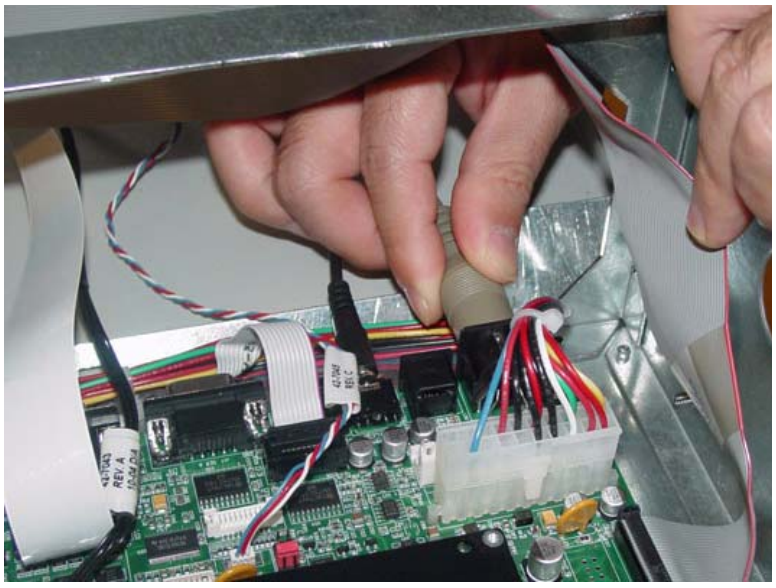

Figure 1-13. Connect the Keyboard Cable to J42 of the Motherboard

6. Connect the touch screen data cable to J2 on the motherboard:
   a. Connect the extension cable provided in the kit to the touch screen data cable (red wire to red wire).
   b. Wrap the joined connectors with electrical tape to ensure that the cables do not become disconnected.
   c. Connect the touch screen data cable extension to J2 on the motherboard.

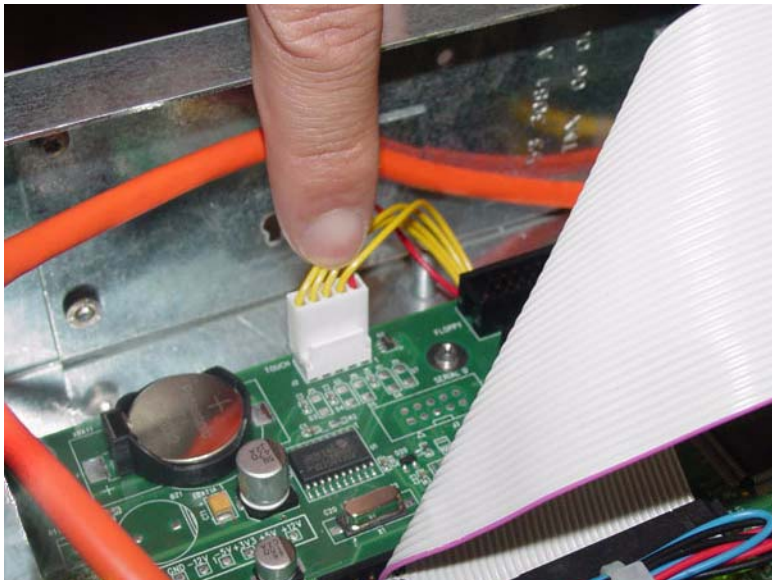

Figure 1-14. Connect the Touch Screen Data Cable to J2 of the Motherboard

7. Connect the inverter cable (backlight) to J32 on the motherboard.

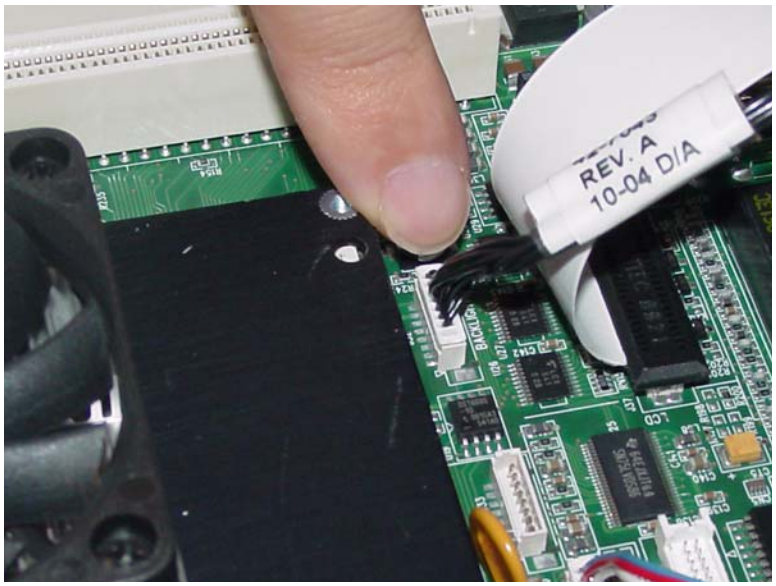

Figure 1-15. Connect the Backlight Cable to J32 of the Motherboard

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8. Connect the contrast cable to J31 on the motherboard.

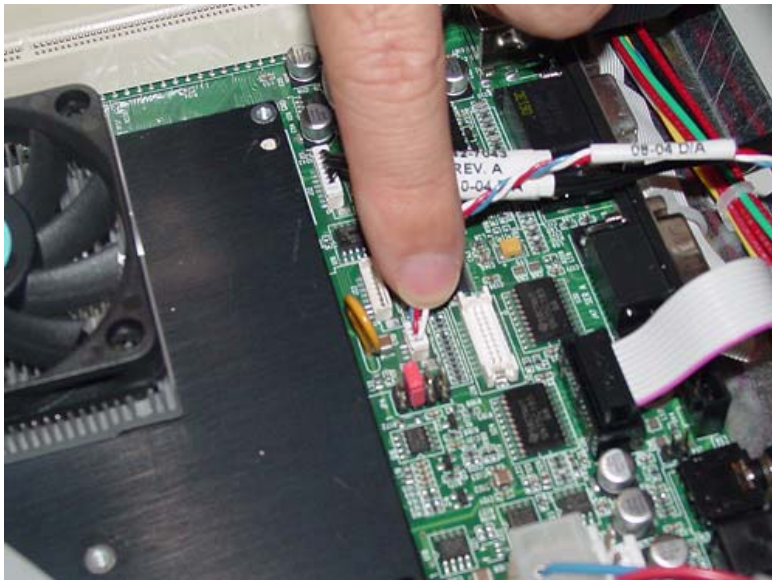

Figure 1-16. Connect the Contrast Cable to J31 of the Motherboard

9. Connect the LCD data cable to J37 on the motherboard

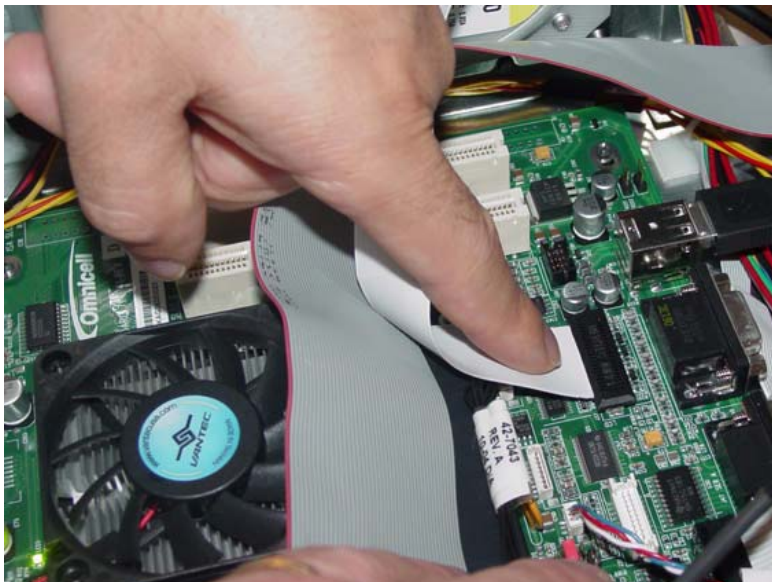

Figure 1-17. Connect the LCD Data Cable to J37 of the Motherboard

10. If a card reader is present and needs to be reconnected:
    a. Connect the card reader serial cable to J47 on the motherboard.
    b. Connect the card reader power cable to the back of the card reader serial connector.
    c. Insert card reader power cable pins into the disk drive power connector.
    d. Align the red-stripe pin to the red cable and the gray-stripe pin to the gray cable in next spot.

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